

## S300Q 6G SAS-SAS 3U16 High Availability Systems



*Qsan's storage systems are designed for high availability, non-stop services, applications demanding high throughput, and flexible storage planning with cost effectiveness for small and medium businesses.*

### Highlights

1. Two 6G SAS ports per controller
2. Up to 70K IOPS & 3000MB/Sec. throughput
3. Fully redundant & hot pluggable designs: RAID controllers, power supplies, fan modules, battery backup modules, & JBOD expansion
4. Green storage designs: auto disk spin down, advanced cooling mechanism, & 80 PLUS energy-efficient power supplies
5. Advanced data protection: RAID 6, 60, QSnap writeable snapshot, Windows VSS support
6. Flexible volume management for multiple applications & environments: virtualization (VMWare, Hyper-V, Citrix), cloud storage, SQL, Exchange, surveillance, file backup, email, & etc.
7. High connection availability: load balancing & failover
8. Extendable capacity up to 144TB

## High Availability

S300Q 6G SAS system is specially designed for high availability applications. The S300Q is well equipped with fully redundant components for all major functions, including redundant RAID controllers, power supplies, fan modules, battery backup modules, and SAS JBOD expansion ports. Being hot pluggable, all of them provide non-stop services. In addition, the firmware is high available as well, including RAID 6, 60 support, QSnap writable snapshot, Windows VSS support, and volume configuration restoration; all of these are provided to reduce the chance of rebooting or shutdown. Distinct from others, S300Q is able to upgrade firmware without system down time. Both firmware image and volume handling are well protected by the redundant RAID controllers; when one RAID controller is down or has lost the connection, the other RAID controller takes over its tasks immediately. The volumes and the services are transferred seamlessly simultaneously.

## Outstanding Performance

S300Q IOPS is 70,000 at maximum, much higher than other storage systems within the same segment in the current market; besides, its throughput is 3000MB/Sec. at maximum.

## Applications

The optimized IOPS and throughput are capable of providing run-time critical online services, such as Cloud storage, SQL, Exchange, and high-end surveillance storages. Furthermore, with the 6G SAS interface, S300Q is ideal for virtualization environments - VMWare, Hyper-V, and Citrix. The data volumes can be managed easily and well protected by Qsan's advanced data protection features, and there will be no system downtime caused by single point of failure.

## Green

All S300Q systems are equipped with Qsan's default green features for power saving. In most cases, the hard drives consume most power. With the auto disk spin down feature and proper configuration, the power consumption of hard drives can be reduced to a minimum, and users will not even notice this feature. S300Q monitors the environment temperature for cooling mechanism and the fan modules respond accordingly. The power supply modules are all 80 PLUS power efficient for better power converting rate. In virtue of the reduction of hard drive power consumption, the advanced cooling mechanism, and the energy-efficient power supplies, the unnecessary power cost is decreased greatly.

## Ordering Information

### Controller Configuration

|                   |                                |
|-------------------|--------------------------------|
| <b>S300Q-D316</b> | Dual controllers               |
| <b>S300Q-S316</b> | Single & upgradable controller |
| <b>S300Q-C316</b> | Single controller*             |

### Optional Components

|                          |                                 |
|--------------------------|---------------------------------|
| <b>Hot pluggable BBM</b> | Battery backup module for cache |
| <b>QSATA board</b>       | SATAII drives support           |

\* The specific functions of dual controller are not available in S300Q-C316.

## S300Q-D316

## S300Q-S316

## S300Q-C316

## Hardware Components

|  |   |                                |                   |
|--|---|--------------------------------|-------------------|
| <b>RAID Controller</b>                             | Dual controllers  | Single & upgradable controller | Single controller |
| <b>No. of Host Channels Per Controller</b>         | 2 x 6G SAS  | 2 x 6G SAS                     | 2 x 6G SAS        |
| <b>Expansion Enclosure</b>                         | J300Q series  | J300Q series                   | J300Q series      |
| <b>Cache Memory Per Controller</b>                 | 2GB, up to 4GB  | 2GB, up to 4GB                 | 2GB, up to 4GB    |
| <b>No. of Hard Drives (SAS &amp; SATA II)</b>      | 16  | 16                             | 16                |
| <b>Max. No. of Hard Drives (SAS &amp; SATA II)</b> | 64  | 112                            | 112               |
| <b>Power Supply</b>                                | 2 x 500W  | 2 x 500W                       | 2 x 500W          |
| <b>Fan</b>   | 2   | 2                              | 2                 |
| <b>Dimensions</b>                                  | 3U 19" Rackmount<br>446.0mm x 499.5mm x 130.0mm (W x D x H) |                                |                   |

## Feature Highlights

|                                 |   |  |
|---------------------------------|---|--|
| <b>Green</b>                    | Auto disk spin down<br>Advanced cooling mechanism<br>80 PLUS energy-efficient power supplies  |  |
| <b>RAID &amp; Volume</b>        | RAID level 0,1,0+1,3,5,6,10,30,50, 60, JBOD, N-way mirror<br>Up to 1024 logical volumes<br>Up to 32 hard drives per volume group<br>One logic volume can be shared by as many as 16 hosts<br>Global and dedicated hot spare<br>Write-through or write-back cache policy<br>Online volume expansion<br>Instant RAID volume availability<br>Auto volume rebuilding<br>On-line volume migration without system down time |  |
| <b>High Availability</b>        | Dual-active RAID controller<br>Cache mirroring through high bandwidth channels<br>Flexible RAID group ownership management<br>Management port seamless take-over<br>Online firmware upgrade, no system down time<br>Multi-path & load-balancing support (Microsoft MPIO)  | Multi-path & load-balancing support (Microsoft MPIO) |
| <b>Advanced Data Protection</b> | QSnap writable snapshot<br>Microsoft Windows Volume Shadow Copy Services (VSS)<br>Configurable N-way mirror<br>Online disk roaming<br>Instant volume configuration restoration<br>Hot pluggable battery backup module (BBM)   |  |
| <b>Management</b>               | LCM; Serial console; SSH telnet; HTTP Web UI; Secured Web (HTTPS); S.E.S.   |  |
| <b>Notification</b>             | Email; SNMP trap; Browser pop-up windows; Syslog; Windows Messenger   |  |
| <b>OS Support</b>               | Windows; Linux; Solaris; Mac  |  |
| <b>Virtualization</b>           | VMWare; Hyper-V; Citrix   |  |
| <b>Warranty</b>                 | 3-year warranty for system<br>1-year warranty for battery backup module   |  |

## Requirements

|                              |   |
|------------------------------|---|
| <b>AC Input</b>              | 100-240V ~ 7A-4A 500W with PFC (Auto Switching) |
| <b>DC Output</b>             | 3.3V-25A; 5V-32A; 12V-40A                       |
| <b>Operating Temperature</b> | 0 to 40°C                                       |
| <b>Relative Humidity</b>     | 5% to 95% non-condensing                        |

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